

Comment on: Effect of side branch predilatation before provisional stenting in coronary bifurcation lesions

Predilatation before stenting coronary bifurcation lesions

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To the editor:

We read with considerable interest the recent article by Kanal et al. entitled “Effect of side branch predilatation before provisional stenting in coronary bifurcation lesions” published in your journal [1]. The authors address a clinically relevant and debated aspect of interventional cardiology, and their work contributes valuable real-world evidence to the literature on bifurcation percutaneous coronary intervention (PCI).

The study's primary conclusion, that routine side branch (SB) predilatation is associated with a higher incidence of procedural complications such as dissection and an increased need for kissing balloon inflation, is a significant finding that reinforces current guideline recommendations. However, we wish to raise several methodological considerations that are crucial for the interpretation of these results.

The most salient point is the pronounced selection bias inherent in the study's non-randomized design. The decision to perform predilatation was operator-dependent, and the predilatation group exhibited significantly more severe SB ostial stenosis (80% vs. 50%, $p < 0.001$). This indicates that the technique was selectively applied to more complex and high-risk lesions. Consequently, the higher complication rate observed in the predilatation group may be more reflective of this underlying lesion complexity than a direct effect of the predilatation strategy itself. A multivariate analysis adjusting for key angiographic parameters, such as stenosis severity and lesion morphology, would help to isolate the independent effect of predilatation.

Furthermore, the intriguing subgroup analysis suggesting a more favorable safety profile with non-compliant (NC) balloons warrants cautious interpretation. The sample size for the NC-only predilatation group ($n = 12$) is limited, and the comparison with the semi-compliant balloon group may be underpowered. While this observation is hypothesis-generating, it highlights the need for prospective studies specifically designed to evaluate the impact of balloon technology on SB outcomes.

Finally, the clinical implications of the study would be strengthened by data on longer-term endpoints. Information on in-hospital or follow-up major adverse cardiac events (MACE), including target vessel revascularization (TVR), would be invaluable. As suggested by prior studies like that of Vassilev et al., procedural outcomes do not always correlate with long-term clinical success [2].

In conclusion, we congratulate the authors on their valuable contribution. Their findings aptly caution against the routine use of SB predilatation. We agree that future prospective, randomized trials are essential to definitively determine whether a selective strategy, potentially utilizing NC balloons in specific high-risk anatomical subsets, can improve patient outcomes.

Ethical Approval

Not required.

Scientific Responsibility Statement

The authors declare that they are responsible for the article's scientific content, including study design, data collection, analysis and interpretation, writing, and some of the main line, or all of the preparation and scientific review of the contents, and approval of the final version of the article.

Animal and Human Rights Statement

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Conflict of interest

None.

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